was the number needed to treat (NNT). Due to lack of face-to-face evidence on biologics, an indirect comparison of the trials was conducted, applying the method proposed by Butcher. **RESULTS:** Sixteen RCTs involving 7339 patients were identified. The active treatment was adalimumab in 1 trial (n = 147), alefacept in three trials (n = 1289), efalizumab in four trials (n = 2444), etanercept in four trials (n = 1964) and infliximab in four trials (n = 1495). All trials were placebo controlled and the primary follow-up time was 12 weeks. The primary outcome was PASI75 criteria in all trials. To achieve PASI75, the number of patients needed to treat (95% confidence intervals) with adalimumab 40 mg/eow, alefacept 15 mg, efalizumab 1 mg/kg, etanercept 2 × 50 mg/week and infliximab 5 mg/kg were 2.04 (1.54–2.94), 5.00 (3.57–7.69), 3.85 (3.13–5.26), 2.27 (2.08–2.50) and 1.32 (1.25–1.39), respectively. Indirect comparisons of TNF-alpha inhibitors and T-cell modulators yielded the odds ratios of 5.54 (3.65–8.42). **CONCLUSION:** All biologicals were superior to placebo, alefacept with the highest and infliximab with the lowest NNT. TNF-alpha inhibitors were significantly superior to T-cell modulators.

PSS3

COMPARING THE EFFECTIVENESS OF CORTISPORIN VS. CIPRODEX FOR ACUTE OTITIS EXTERNA IN THE LOUISIANA MEDICAID POPULATION

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OBJECTIVE: To compare the effectiveness of Cortisporin and Ciprodex therapies in the treatment of acute otitis externa (AOE) in the Louisiana Medicaid population. **METHODS:** A retrospective analysis of Louisiana Medicaid data using paid claims from January 1, 2004, to December 31, 2005, was conducted for recipients aged 1–64 years. Recipients with an AOE medical claim (index diagnosis) followed within five days by a claim for Ciprodex or Cortisporin were identified. Any recipients with dual therapy (defined as greater than one antibiotic or otic agent), concomitant infection, AOE diagnosis within 30 days prior to index diagnosis, or other diagnosis warranting antibiotic therapy within 30 days post index claim were excluded. Each recipient's medical and pharmacy claims for 30 days after the index diagnosis were identified and evaluated for treatment failure. Treatment failure was defined as presence of an additional prescription claim for an antibiotic (oral or otic) or an antibiotic-steroid combination with or without another medical AOE claim. The two drug cohorts (Ciprodex and Cortisporin) were matched using the greedy match technique. Effectiveness, defined as the proportion of failure patients in each cohort, was analyzed using the binomial proportion test. **RESULTS:** The population consisted predominately of females (55.66%), Caucasians (63.49%), and recipients from the New Orleans region (34.02%). Forty-eight percent of the prescription claims were written by pediatricians. Each matched cohort had 901 recipients with average age 10.01 (SD = 6.50) years (Ciprodex), and 10.45 (SD = 7.27) years (Cortisporin). Before propensity score matching, the respective failure rates for Cortisporin and Ciprodex were 7.47% and 4.69% (p = 0.0009). Within the matched cohorts, respective failure rates for Cortisporin and Ciprodex were 6.88% and 4.77% (p = 0.056). **CONCLUSION:** In the Louisiana Medicaid population, Cortisporin had a higher failure rate than Ciprodex for AOE; after propensity score matching the difference approached statistical significance at the 0.05 alpha level.

PSS4

THE RCT EVIDENCE OF COMPARATIVE EFFECTIVENESS AND SAFETY OF TOPICAL GLAUCOMA MEDICATION

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OBJECTIVE: To classify published randomised controlled trials (RCTs) regarding the comparative efficacy and safety of topical glaucoma treatment to identify where the evidence lies and the gaps for future research. **METHODS:** A systematic search of MEDLINE, EMBASE, Cochrane Central and conference proceedings for RCTs recruiting adults with primary open-angle glaucoma (POAG) and/or ocular hypertension (OH) receiving any topical medication or placebo. After double-data entry, the characteristics were analysed with a focus on prostaglandin-containing trials. **RESULTS:** We identified 510 RCTs. Mean study duration was 15.2 weeks (SD 19.9), with 78% of studies lasting less than three months. Grouping of studies by duration and treatment showed that short-term efficacy was available for all treatments, but RCT evidence of longer-term safety (>12 months) was confined to latanoprost (three trials) and timolol maleate (two trials) in the monotherapy group and dorzolamide and timolol in fixed combination (one trial). The majority of the study population (79.6%) was Caucasian. The data on co-morbidity was sparse. Of prostaglandins, only latanoprost reported hypertension as a sub-group. Latanoprost monotherapy and latanoprost/timolol fixed combination therapy had been compared with the broadest range of alternative therapies. Latanoprost alone had been compared with all other classes of treatments. **CONCLUSION:** There are extensive RCT data available for glaucoma treatment. Latanoprost has the most RCTs and is the only prostaglandin analogue with RCTs over 12 months. Other research methodologies (i.e. observational studies) have to be considered alongside RCTs to address important clinical issues like long-term safety and disease progression. There is a lack of RCT evidence to explore differential treatment-effects among subgroups.

SENSORY SYSTEMS DISORDERS—Cost Studies

PSS5

MEDICAL COST OF GLAUCOMA IN SWEDEN

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OBJECTIVE: Glaucoma has been estimated to affect 2.1% of the population aged 40 years and over and given the clinical impact of glaucoma, it is important to evaluate the potential economic burden of the disease. The aims were to estimate the direct medical costs of glaucoma in Sweden and also to investigate the hypothesized cost drivers; intraocular pressure (IOP), amount of visual field damage estimated by the MD, change of MD (ÄMD) and pseudoexfoliation syndrome (PEX). **METHODS:** The study was based on 583 Swedish patients with open-angle glaucoma and manifest field loss followed between 4.5 and 9.25 years. Data on MD, IOP, PEX, medical resources, and low-vision centre visits were collected and organized in three-month periods. The average baseline MD was −11.7 dB and initial values of average IOP, age were 22.5 mmHg, and 71 years, respectively. All used resources were multiplied with its respective unit costs to calculate the medical costs for each patient. Cost regressions were estimated with a multivariate population-averaged panel data model. **RESULTS:** Average annual medical cost/patient of glau-

coma was estimated at €627/year. Independent cost drivers were IOP ($p < 0.001$), MD ($p < 0.001$), ÄMD ($p = 0.03$) and PEX ($p < 0.001$). Prevalence of PEX was associated with 21% higher costs. Each one-unit increase in mmHg (IOP), decrease in dB (MD) or ÄdB/year (ÄMD) increased costs by 2.9 %, 1.2% and 5.7%, respectively. Patients that had visited a low-vision centre at least once had 46% higher annual costs than the average patient. **CONCLUSION:** MD, ÄMD, IOP, and PEX are all drivers of medical cost of glaucoma in Sweden. Further, the variables are predicting cost independently of each other.

PSS6

COST-EFFECTIVENESS OF INTERMITTENT VS. CONTINUOUS ANTI-TNF ALPHA THERAPY IN PLAQUE PSORIASIS

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OBJECTIVE: To assess the cost-effectiveness of intermittent vs. continuous anti-TNF alpha therapies in chronic plaque psoriasis. **METHODS:** An economic model was constructed to estimate the cost per month in remission for intermittent etanercept 25 mg twice weekly (biw) or 50 mg biw, continuous adalimumab or continuous infliximab compared with no systemic therapy (NST). Patients considered had chronic plaque psoriasis with both Psoriasis Area and Severity Index (PASI) and Dermatology Life Quality Index (DLQI) > = 10 at baseline, and so would be eligible for anti-TNF alpha treatment under UK guidelines. Remission was defined at patients experiencing an improvement of at least 75% of their baseline PASI. Response rates were taken from registration studies for each agent: maintenance of response with continuous therapy and likelihood of response to intermittent therapy were extrapolated from published studies to a time horizon of ten years using a Markov process. Costs were estimated from a UK payer perspective including drug cost, administration visits and hospital stay for treatment failures. **RESULTS:** Cost per month in remission for each therapy compared with NST was estimated to be: GBP162 (95% CI: 93–287) for etanercept 25 mg biw; GBP418 (337–531) for etanercept 50 mg biw; GBP1,867 (1,643–2,136) for infliximab and GBP588 (452–804) for adalimumab. The cost-effectiveness ratios for continuous therapies were sensitive to the criteria used for withdrawal from treatment. The cost-effectiveness ratios for intermittent therapy were sensitive to the duration of treatment interruption achieved and response rate after therapy re-introduction. All regimens were found to be particularly appropriate in psoriasis patients with severe disease at baseline. **CONCLUSION:** The model found intermittent treatment with etanercept to be more efficient than continuous treatment with other anti-TNF alpha therapies, as it allows patients to be maintained in response at lower drug cost.

PSS7

THE COST-EFFECTIVENESS OF RANIBIZUMAB COMPARED TO PDT-V AND BSC FOR THE TREATMENT OF AGE-RELATED MACULAR DEGENERATION IN CANADA

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OBJECTIVE: To evaluate the cost-effectiveness of ranibizumab versus photodynamic therapy with verteporfin (PDT-V) and best standard care (BSC) for the treatment of all wet age-related macular degeneration (AMD) lesion subtypes (predominantly classic (PC), minimally classic (MC) and occult lesions (OC)) in Canada. **METHODS:** A ten-year Markov model with three-month cycles was adapted to the Canadian setting to simulate the evolution of visual acuity (VA) levels in subfoveal wet AMD patients according to Canadian guidelines. Analyses were performed from the perspective of the Ontario Ministry of Health with each AMD subtype modeled separately. The initial distribution of patients across VA levels followed the distribution observed in MARINA and ANCHOR (sham controlled phase III randomized multicentre clinical trials) at randomization. Transition probabilities were based on data from the same trials. Treatment with 0.5 mg ranibizumab was assumed, with nine injections in year 1 and six injections in year 2. Treatment duration was assumed to be one year for PC and two years for MC and OC lesions. Five clinicians completed a resource use questionnaire from which therapy and adverse event costs were estimated (2007 CDN$). Quality-of-life estimates were obtained from a time trade-off study carried out in a sample of the UK general population. Outcomes were measured in terms of quality-adjusted-life-years (QALY) and discounted (along with costs) at 5% annually. One-way and probabilistic sensitivity analyses were performed to estimate uncertainty around incremental cost-effectiveness ratios (ICER). **RESULTS:** Ranibizumab demonstrated cost-effectiveness relative to PDT-V and BSC in all lesion types assuming a $50,000 threshold. The ICER for PC lesions was $4,167/QALY and $21,857/QALY relative to PDT-V and BSC respectively. For MC and OC lesions the ICER was $37,363/QALY and $38,151/QALY respectively relative to BSC. **CONCLUSION:** Ranibizumab offers good value for money compared to current standard treatments for all wet AMD lesion types.

PSS8

ESTIMATING COST-EFFECTIVENESS OF TOPICAL OCULAR HYPOTENSIVES FOR MAINTAINING PERSISTENT THERAPY USING AREA UNDER THE SURVIVAL CURVE

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OBJECTIVE: To compare cost-effectiveness of topical prostaglandins for maintaining persistency during the first 2 years after initiating therapy. **METHODS:** Data derived from Ingenix managed care database. Patients with latanoprost (LAT), bimatoprost (BIM), travoprost (TRAV) dispensed between Janaury 1, 2004–December 31, 2004 screened for inclusion. Index agent = first agent filled; index date = fill date. Patients excluded if: < 40 years old; not continuously enrolled for 180 days before index date; had any ocular hypotensive dispensed or no glaucoma diagnosis within 180 days before index date. Data censored at the earliest of end of enrollment; end of study (December 31, 2005); or upon adding/switching to a new agent. Cox regression (adjusted for age, gender, recent diagnosis of preglaucoma/ocular hypertension) used to compare relative risk of discontinuation of initial prostaglandin and produce survival (on therapy) plot over first 720 treatment days for each prostaglandin. Area under survival curve used to estimate expected days on therapy. **RESULTS:** A total of 9124 patients met inclusion criteria (LAT, n = 5816; BIM, n = 1665; TRAV, n = 1643). Relative risk of discontinuing index prostaglandin over first 2 years was 8.3% higher for BIM ($p = 0.016$) and 24.4% higher for TRAV ($p < 0.001$). Within the first 720 days, expected days of uninterrupted, continuous therapy were estimated as 245 for LAT, 226